

**SECRET**

DDI-587 7

NPIC/D-19-67  
15 FEB 1967

**MEMORANDUM FOR:** Deputy Director for Intelligence

**SUBJECT :** Request for Approval of the Viewgraph Maker Project with [redacted] from FY 1967 Funding

25X1

**REFERENCE :** Chief, Administrative Staff, O/DBI Memorandum of 4 February 1964 on "Approval of R&D Activities."

1. The Viewgraph Maker Project has been prepared for your approval in order to carry out contract negotiations in FY 1967. This project will consist of modifying two (2) [redacted] Platecasters to perform as rapid access viewgraph makers. This equipment will provide a solution to operational requirements within NPIC.

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2. The attached staff study, tabs, and contract proposal present the complete schedule, plans, and justification for the project.

3. It is recommended that this project be approved at a funding level of [redacted] in FY 1967.

25X1

[redacted]

25X1

ARTHUR C LUNDALL  
Director

National Photographic Interpretation Center

Attachments: a/s

25X1

[redacted]

APPROV

*JN* D. J. SMITH  
Deputy Director for Intelligence

28 FEB 1967  
DATE

Distribution:

- Original - NPIC/SS/LB (after approval)
- 1 - FBI
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- 2 - NPIC/TDS/DS

Declass Review by NGA.

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NPIC/TDS/DS [redacted] (8 February 1967)

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GROUP 1  
Excluded from automatic  
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6 January 1967

VIEWGRAPH MAKER -- STAFF STUDY

#10197

1. PROBLEM

To provide rapidly produced, black and white, low cost viewgraphs from various sized reflective or transparent materials.

2. FACTS BEARING ON THE PROBLEM

a. A rapid system for preparing special purpose viewgraphs is required for some briefings within the community; on many occasions IAD and PD are requested to provide such quick reaction materials.

b. The production of quick reaction viewgraphs will not impinge upon the high quality viewgraph production requirements normally fulfilled by the Production Services Division. Currently, viewgraphs must be prepared by the photo laboratory with a copy camera or photographic printer using standard photographic processes.

c. Viewgraphs under this project would be prepared from transparent and reflective copy originals ranging in size from 70 mm to 40" x 40". A viewgraph would be mounted and ready for projection in less than five minutes.

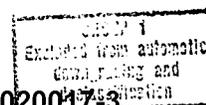
d. The recently developed  diffusion transfer material will be utilized in the device to make black and white viewgraphs, it will produce a projection-quality, reduced or enlarged, positive transparency within one minute.

3. DISCUSSION

a. Current Procedures - Viewgraphs are produced by the Center's photo laboratory. A viewgraph is produced from an original image on film by either projection or contact printing on to a conventional photographic material. When viewgraphs are made from reflective copy, negatives are produced in a copy camera, processed, and contact printed to obtain the viewgraph positives. The viewgraphs thus produced are of very high quality and are ideal for use in briefings when there is ample lead time. However, for immediate response briefings, the present system is not appropriate.

b. Origin of Concept - The need for immediately available viewgraphs has been recognized by NPIC components for several years. The requirement was formalized in a recommendation from the NPIC/Publications Division in July 1966 and supported by the Imagery Analysis Division, CIA.

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An investigation determined that the suggestion is valid and that no other developments under consideration will render this project unnecessary.

An investigation of rapid access photographic materials, to find a possible material to satisfy the requirements, considered such materials as Diazo, Kalvar, and Bimat. The Bimat diffusion transfer material seemed to offer a solution to the requirement and became a candidate for consideration.

X1 In September of 1966, [ ] demonstrated the [ ] Diffu- 25X  
X1 sion Transfer material to the NPIC/TDS. This material had definite  
X1 advantages over the Bimat. The Bimat requires presoaking of the transfer  
X1 material. The [ ] does not, and therefore requires a less complicated 25X  
X1 handling and storage system. The [ ] material is faster than Bimat.  
The entire [ ] process from exposure to a finished positive requires  
approximately one-half the time required for Bimat.

X1 c. Selection of Contractor - [ ] has submitted an 25X  
X1 unsolicited proposal to modify an [ ] Platemaster to utilize the [ ] 25X  
X1 diffusion transfer material for viewgraph production. [ ] 25X  
X1 is the supplier of the [ ] material. The [ ] Platemaster is an "off- 25X  
X1 the-shelf" equipment, and the modification as proposed by [ ] is expected 25X  
to result in a very successful system for solving the rapid access view-  
graph requirement.

X1 d. Proposed Work - The main console of the [ ] 10.15 Platemaster 25X  
X1 will be modified to accept the [ ] Processor drive system. The input  
platen will be modified to include a light table for photographically  
reproducing transparent film to viewgraph size, by either reduction or  
magnification. Manually adjustable lightmasks will be used for light  
table operation. The optical system of the Platemaster will be modified  
because of the reduction magnification range required.

e. Phasing - This development modification program will require  
approximately four months for the first unit to be delivered and an addi-  
tional two months for delivery of the second unit. As illustrated in  
Tab C, roughly equal time will be spent on equipment modification design,  
fabrication, and assembly. The contractor will provide monthly reports  
which will make it possible to control the scope of the project as it  
progresses.

X1 f. Coordination - There is no known equipment either under develop-  
ment or available commercially which will satisfy this requirement. This  
project has been coordinated with [ ] of DDS&T/ORD, [ ] of Navy 25X  
X1 Photographic Center, and [ ] of DIA.

g. Alternatives - The new transfer material which forms the basis for the proposal makes it possible to solve the problem of rapid access viewgraphs for immediate briefings. The alternative would be to continue to produce view graphs with the current procedures at more costs in manpower and efficiency over the next year.

4. CONCLUSIONS

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X1  
The acquisition of an automatic, quick reaction viewgraph maker would provide special purpose viewgraphs and put the Center in a position to provide service in an area where it has been weak, namely, in the after-the-mission phase of intelligence dissemination. The proposal from the [ ] to modify an [ ] Platemaster to accept the [ ] material, should result in a very successful answer to the problem of producing viewgraphs rapidly. 25X

5. RECOMMENDATION

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It is recommended that a contract be let with the [ ] for the modification-development project, as proposed, for two Viewgraph Makers at a funding level of [ ] 25X

6. REFERENCES AND ATTACHMENTS

Tab A Catalog Form

Tab B Memoranda from IAD, PD

Tab C Program Phasing

X1  
Attachment: [ ] Proposal

<b>R &amp; D CATALOG FORM</b>		DATE 1 December 1966
1. PROJECT TITLE/CODE NAME  Viewgraph Maker	2. SHORT PROJECT DESCRIPTION  Modification of an <input type="checkbox"/> Platemaster for use as a rapid access viewgraph maker (2 units).	
3. CONTRACTOR NAME	4. LOCATION OF CONTRACTOR	
5. CLASS OF CONTRACTOR Manufacturer	6. TYPE OF CONTRACT FFP	
7. FUNDS  FY 1966 \$ None	8. REQUISITION NO.	9. BUDGET PROJECT NO.  NP-R-19-10197
FY 1967 \$ <input type="checkbox"/>	10. EFFECTIVE CONTRACT DATE (Begin - end)  January 1967-July 1967	11. SECURITY CLASS. A.A. - Confidential T. - Unclassified W. - Unclassified
FY 1968 \$ None		
12. RESPONSIBLE DIRECTORATE/OFFICE/PROJECT OFFICER TELEPHONE EXTENSION  DDI/NPIC/TDS/ <input type="checkbox"/>		
13. REQUIREMENT/AUTHORITY  This project is to satisfy a common requirement from two operational NPIC components to rapidly produce a viewgraph by magnification or reduction in transparent or reflective copy.		
14. TYPE OF WORK TO BE DONE  Engineering Development		
15. CATEGORIES OF EFFORT		
MAJOR CATEGORY	SUB-CATEGORIES	
Reproduction Techniques & Materials	Photo Equipment	
	Copy Camera	
	Diffusion Transfer Materials	
16. END ITEM OR SERVICES FROM THIS CONTRACT/IMPROVEMENT OVER CURRENT SYSTEM, EQUIPMENT, ETC.  The final product will be 2 (two) modified <input type="checkbox"/> Platemasters which will rapidly produce viewgraphs.		
17. SUPPORTING OR RELATED CONTRACTS (Agency & Other)/COORDINATION  There is no known equipment either under development or available commercially which will satisfy this requirement. This project originated as a suggestion from NPIC/PD and has been coordinated with DDS&T/ORD, DIA, and NPC.		
18. DESCRIPTION OF INTELLIGENCE REQUIREMENT AND DETAILED TECHNICAL DESCRIPTION OF PROJECT (Continue on additional page if required)  The proposed modified Platemaster will allow the Publications Division and Image Analysis Division to respond to "immediate need" requirements for supplying viewgraphs. The modification includes the development and design of an internal processing unit which will accept the <input type="checkbox"/> Diffusion Transfer Material.		
19. APPROVED BY AND DATE		
OFFICE	DEPUTY DIRECTOR	DDCI
Approved For Release 2005/06/06 : CIA-RDP78B04770A002800020017-3		

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(14)

IAD/OSS-256/66  
23 November 1966

MEMORANDUM FOR: Assistant for Technical Development, NPIC

X1 ATTENTION : [ ] Development Staff  
FROM : Chief, Imagery Analysis Division, CIA  
SUBJECT : Proposed Automatic Viewgraph Generator  
X1 REFERENCE : [ ] Technical Proposal  
Number 66-3560-1, dated 2 November 1966

X1 1. The Imagery Analysis Division was pleased to have an opportunity to review [ ] proposal for development of an Automatic Viewgraph Generator.

2. As you are aware, the IAD is often faced with high priority requirements requiring rapid response; an Automatic Viewgraph Generator would greatly facilitate handling such requirements. It is anticipated that this device would make a significant contribution toward increasing this division's rapid response capabilities. The capability of rapidly producing, at low cost, viewgraphs "in-house" should be of prime benefit to our efforts in support of OCI (following each mission) and to our many requirements for high priority briefings on short notice.

X1 3. An Automatic Viewgraph Generator would fill a presently existing gap in the family of "in-house", "quick and dirty", reproduction devices presently used in IAD; such as the RIPP, the Photogrammetry Quick Copy Cameras, the [ ] Photo-Micrographic Enlargers, the MP3 poloroid Lantern Slide generation capability, and the [ ] PI Rapid Copy Viewer/Printer presently under consideration. The numerous staff studies and cost/effectiveness analyses made by IAD to support the concept of "in-house" graphics preparation provide a background of information against which we have evaluated this proposal; concluding that such a device would not only increase our operational effectiveness, but would offer significant manpower and operating cost reductions.

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IAD/OSS-256/66  
23 November 1966

X1 4. In light of the above comments, the Imagery Analysis Division feels that it would be prudent to accept the [ ] offer to construct two of these devices simultaneously. We feel that this development is on firm technical footing with a relatively low risk of failure; since this device is, in all honesty, a modification of existing and successful shelf hardware. We feel that our operational requirement for this device more than justifies the expenditure of an additional [ ] to procure two units (one for PD and one for IAD) rather than one. 25X

5. The Imagery Analysis Division is appreciative of past efforts of your staff which have resulted in many of our "in-house" capabilities, and feel that your efforts on our behalf in this development project will lead to equally successful results. 25X



Distribution  
Original - Addressee  
2 - OSS/IAD

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NPIC/PD 2-67  
5 January 1967

MEMORANDUM FOR: Assistant for Technical Development

SUBJECT : Publications Division Requirement for a "Vugraph Maker"

1. This will assure you that the Publications Division is still as interested in a rapid means for preparing positive transparencies of imagery for incorporation in vugraphs as it was last summer when the request to develop such a device was initially made.

2. The modified version of the [redacted] platemaster, as subsequently developed to specifications, seems to meet this need. Not only would it produce transparencies of suitable size extremely rapidly, but it would also enlarge or reduce the copy, thus providing a wide range of flexibility. As you know, [redacted] of the Publications Division made a trip to [redacted] of IAD to see samples of the product and to discuss technical specifications with one of [redacted] staff engineers. He reported complete satisfaction with the sample products made using the [redacted] diffusion transfer process as well as with performance specifications for the film.

3. Acquisition of such a piece of equipment would provide a quick reaction time for the preparation of special-purpose vugraphs which now require priority handling in the lab to meet crash deadlines. The acquisition of such a piece of equipment should also put the Center in a position to speed up service in an area where it has long been weakest, namely in the after-the-mission phase of intelligence dissemination.

[redacted]  
Chief, Publications Division, NPIC

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declassification

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### 3. STATEMENT OF WORK

The proposed program will be accomplished as indicated in the following program schedule. The four primary categories of effort will be design, fabrication, assembly, and test. During the early phases of the program, human factors engineers will thoroughly evaluate and analyze the equipment operational characteristics to ensure an optimized man-machine relationship. The performance characteristics of the equipment deliverable under this procurement will be in accordance with the design and performance specifications listed in Section 4.

Program Schedule, months

